

REMARKS

Entry of the foregoing, reexamination and reconsideration of the subject application are respectfully requested in light of the amendments above and the comments which follow.

As correctly noted in the Office Action Summary, claims 1, 3-7, 13-15 and 17-19 were pending. By the present response, claims 1, 7, 13 and 15 have been amended. Thus, upon entry of the present response, claims 1, 3-7, 13-15 and 17-19 remain pending and await further consideration on the merits.

Support for the foregoing amendments can be found, for example, in at least the following locations in the original disclosure: the original claims

OBJECTION TO THE SPECIFICATION

The specification was objected to as set forth in paragraph 2 of the Official Action. Applicants respectfully assert that the definitions for constants appearing in Eq. 1 of the specification are well known to those of ordinary skill in the art of the relevant technical area and Applicants reserve the right to establish them as such. They are therefore not objectionable. However, to advance prosecution of the present claims, Applicants have removed the definitions from the claims. Accordingly, the objection has been obviated and should be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. §102

Claims 1, 3, 4, 6, 7, 13-15 and 17 stands rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 6,018,414 to Chipper (hereafter "*Chipper*") on the grounds set forth in paragraph 4 of the Official Action. For at least the reasons noted below, this rejection should be withdrawn.

Applicants' independent claims 1, 7, 13 and 15 are directed to infrared lenses or infrared imaging optical arrangements comprising, *inter alia*, one of the first surface and the second surface includes a kinoform superimposed on an aspheric surface (claims 1 and 7); a first aspherical surface superimposed with a kinoform (claim 13); a first lens having a kinoform superimposed on an aspheric surface on one of a first surface or a second surface (claim 15); or a kinoform superimposed on an aspheric surface on one of a first surface or a second surface (claim 17). Thus, each of the independent claims is directed to the idea of a single optical surface with a diffractive surface superimposed on an aspheric surface.

The *Chipper* patent discusses a dual band infrared application employing diffractive surfaces on flat plastic lens elements (to reduce cost) that may be rotated into position for either the mid wave or long wave IR spectral band. It further describes how aspheric or diffractive surfaces can be diamond turned on an infrared lens and even describes how an aspheric surface may be molded using TI1173 infrared material.

However, the *Chipper* patent does not disclose the idea of a single surface with a diffractive surface superimposed on an aspheric surface as presented in Applicants' claims. The Examiner has referenced col. 9, lines 40-47 of *Chipper* as

disclosing superimposing a kinoform on an aspheric surface (Office Action paragraph 7). This passage of *Chipper* recites:

Additionally, although the diffractive surfaces are formed as separate lenses in zoom lens assembly 16, it will be understood by those skilled in the art that the diffractive surface can be formed on a second side of a lens element. For example, the diffractive surface of diffractive lens 42 could be formed instead on a second side of objective lens 32, thus eliminating the need for the separate diffractive lens 42

The Examiner has misinterpreted this passage. The passage indicates that the diffractive surfaces are normally separate lenses, but may be instead placed on a second side of the [objective] lens element. The passage actually indicates that the aspheric and the kinoform can be placed on different sides of a single lens, not superimposed on a single surface of a single lens. This interpretation of *Chipper* is contrary to the Examiner's assertion.

When properly interpreted, the disclosure in *Chipper* relied upon by the Examiner cannot support an anticipatory rejection because the disclosure in *Chipper* does not include each and every element of Applicants' independent claims. Withdrawal of these rejections is respectfully requested.

Withdrawal of the dependent claims rejected under *Chipper* is also requested.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 5, 18 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Chipper* in view of U.S. Patent No. 4,154,503 to Lettington et al. (hereafter "*Lettington et al.*") on the grounds set forth in paragraph 6 of the Official Action. Applicants respectfully traverse the rejection.

The Examiner has relied on *Lettington et al.* However, nothing disclosed in the noted portion of the disclosure of *Lettington et al.* contributes to overcome the above-noted deficiency with respect to the disclosure in *Chipper*. Accordingly, the proposed combination of *Chipper* and *Lettington et al.* does not establish a *prima facie* case of obviousness with respect to claim 5, 18 and 19 because the proposed combination does not disclose each and every element of Applicants' claims. See M.P.E.P. §2143. Specifically, the disclosure in *Lettington et al.* arsenic selenide glass does not contribute to overcome the differences noted above with respect to the two surface elements of *Chipper* and the single surface diffractive surface superimposed on an aspheric surface of Applicants' claims. Withdrawal of this rejection is, therefore, respectfully requested.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: March 23, 2004

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

By: 

Jeffrey G. Killian
Registration No. 50,891